

**CLAIMS**

What is claimed is:

- 1 1. A method for driving a display, comprising the steps of:
  - 2 (a) storing a voltage value in an analog memory associated with each pixel of a
  - 3 display, wherein each of the pixels has a comparator associated therewith;
  - 4 (b) applying a reference voltage and the voltage values stored in the analog memory
  - 5 to the comparators of the pixels;
  - 6 (c) comparing the voltage values with the reference voltage for determining which
  - 7 of the voltage values matches the reference voltage; and
  - 8 (d) changing the state of the pixels whose voltage values match the reference
  - 9 voltage.
- 1 2. The method as recited in claim 1, wherein the display is an active matrix panel
- 2 display.
- 1 3. The method as recited in claim 1, and further comprising the step of applying
- 2 illumination.
- 1 4. The method as recited in claim 3, wherein the reference voltage is changed as a
- 2 function of time for causing each pixel to change state at a desired time.
- 1 5. The method as recited in claim 1, wherein the states of groups of the pixels are
- 2 changed, and further comprising the step of changing the states of the groups of
- 3 the pixels in multiple phased cycles.
- 1 6. The method as recited in claim 5, wherein the groups are interspersed on the
- 2 display to avoid flicker at low update rates.

1    7.     The method as recited in claim 1, wherein the pixel provides illumination.

1    8.     The method as recited in claim 7, wherein the display is an organic light  
2       emitting diode display (OLED).

1    9.     The method as recited in claim 8, wherein the states of groups of the pixels are  
2       changed, and further comprising the step of changing the states of the groups of  
3       the pixels in multiple phased cycles.

1    10.    The method as recited in claim 9, wherein the groups are interspersed on the  
2       display to avoid flicker at low update rates.

1    11.    The method as recited in claim 1, wherein the voltage value in at least a portion  
2       of the analog memories is adjusted for providing gamma correction.

1    12.    A system for driving a display, comprising:  
2       (a) a plurality of pixels;  
3       (b) an analog memory associated with each pixel of a display, wherein a voltage  
4       value associated with each of the pixels is stored in the analog memory;  
5       (c) a comparator associated with each of the pixels, wherein the comparators  
6       compare the voltage values with a reference voltage for determining which of  
7       the voltage values match the reference voltage; and  
8       (d) logic for changing the state of the pixels whose voltage values match the  
9       reference voltage.

1    13.    The system as recited in claim 12, wherein the display is an active matrix panel  
2       display.

1    14.    The system as recited in claim 12, and further comprising logic that applies  
2                 illumination after the change of state of the at least one pixel.

1    15.    The system as recited in claim 14, wherein the reference voltage is changed as a  
2                 function of time for causing each pixel to change state at a desired time.

1    16.    The system as recited in claim 12, wherein the states of groups of the pixels are  
2                 changed in multiple phased cycles.

1    17.    The system as recited in claim 16, wherein the groups are interspersed on the  
2                 display to avoid flicker at low update rates.

1    18.    The system as recited in claim 12, wherein the pixel provides illumination.

1    19.    The system as recited in claim 18, wherein the display is an organic light  
2                 emitting diode display (OLED).

1    20.    The system as recited in claim 19, wherein the states of groups of the pixels are  
2                 changed, and further comprising the step of changing the states of the groups of  
3                 the pixels in multiple phased cycles.

1    21.    The system as recited in claim 20, wherein the groups are interspersed on the  
2                 display to avoid flicker at low update rates.

1    22.    The system as recited in claim 12, wherein the voltage value in at least a portion  
2                 of the analog memories is adjusted for providing gamma correction.

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1 23. The system as recited in claim 12, wherein each of the pixels includes a level  
2 shifter for changing a lower voltage to a higher voltage for output to a pixel  
3 electrode of the associated pixel.

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